


June 21, 1996

**MEMORANDUM**

**TO:** Orville D. Green, Assistant Administrator  
Permits and Enforcement

**FROM:** Brian R. Monson, Chief   
Operating Permits Bureau

**SUBJECT:** Issuance of Non-substantive Modification of  
Tier II Operating Permit #017-00048 to  
Interstate Concrete & Asphalt, Sandpoint

**PURPOSE**

The purpose of this memorandum is to satisfy the requirements of IDAPA 16.01.01.400 (Rules for the Control of Air Pollution in Idaho) for issuing Tier II Operating Permits.

**PROJECT DESCRIPTION**

This project involves the modification control equipment specifications for the hot mix asphalt plant. The hot mix asphalt plant is part of the facility that was issued a Tier II Operating Permit for the RACT/RACM Implementation Project.

**SUMMARY OF EVENTS**

On July 7, 1995, DEQ issued a Tier II Operating Permit to Interstate Concrete & Asphalt (Interstate) for the Sandpoint, Idaho facility. On May 8, 1996, DEQ received a request from Interstate for the modification of the control equipment specifications in the permit.

**RECOMMENDATIONS**

Based on review of Interstate's submittal and state and federal rules and regulations, the Bureau staff recommends that Interstate Concrete & Asphalt, Sandpoint, be issued a non-substantive modification to their Tier II Operating Permit. No public comment period is required for this project, and no additional Tier II permit application fees apply.

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CC: G. Burr, NIRO  
COF  
Source File  
OP File Manual

June 21, 1996

**MEMORANDUM**

**TO:** Brian R. Monson, Chief  
Operating Permits Bureau  
Permits and Enforcement

**FROM:** Darrin A. Mehr, Air Quality Engineer, *DM*  
Operating Permits Bureau

**THROUGH:** Susan J. Richards, Air Quality Permits Manager *SR*  
Operating Permits Bureau

**SUBJECT:** Technical Analysis for Non-Substantive Modification of  
Tier II Operating Permit #017-00048  
Interstate Concrete & Asphalt (Sandpoint)

**PURPOSE**

The purpose of this memorandum is to satisfy the requirements of IDAPA 16.01.01.401.03(a) (Rules for the Control of Air Pollution in Idaho) for the issuance of Operating Permits.

**FACILITY DESCRIPTION**

Interstate Concrete & Asphalt owns and operates a facility in the Sandpoint Nonattainment Area (SNA) containing both a concrete batch plant and a portable asphalt batch plant. The concrete plant and asphalt plant can operate simultaneously. The asphalt plant was originally issued a State of Idaho Permit to Construct (PTC) in June 1990. The concrete batch plant was not included in that permit. No aggregate crushing or washing activities occur on site. The facility was issued a Tier II Operating Permit (OP) on July 7, 1995.

**Asphalt Plant**

Haul trucks bring crushed aggregate and sand on site where it is dumped into storage piles. A front-end loader transfers aggregate and sand, as needed, to a three-bin cold feed hopper. Metered quantities of aggregate are fed from the hopper onto a conveyor. The conveyor passes the aggregate through a screen and delivers the aggregate to a natural gas-fired rotating drum dryer. In the drum dryer the aggregate is heated to approximately 300 °F and is transported by a bucket conveyor to a size segregating screen and stored shortly before being reportioned in a weigh hopper prior to transfer into a pug-mill mixer. In the pug-mill mixer the aggregate is thoroughly mixed with asphalt oil before either being dropped onto a drag slat conveyor for transport into storage silos, or into haul trucks.

The hot mix asphalt plant is a Barber Greene model DA-65, which is a drum-mix design, with a manufacturer's rated production capacity of 200 tons per hour (T/hr). The burner has a heat input capacity of thirty-six (36) million British Thermal Units per hour (BTU/hr), and operates on natural gas. The hot mix drum dryer is currently allowed to operate at a capacity of up to 140 T/hr. PM and PM<sub>10</sub> emissions from the drum dryer, hot storage bin, weigh scale and pug mill mixer are presently controlled by a FlexKleen baghouse. Reclaimed baghouse dust is combined with dried aggregate in the hot storage bin.

Asphalt oil is delivered to the facility by bulk tankers. The tankers transport the asphalt oil to one of the storage tanks. The asphalt plant also loads raw aggregate into haul trucks directly from a front-end loader.

### Concrete Plant

Equipment at the concrete batch plant includes the batch unit with cement and aggregate weigh hoppers and load-out conveyor belt, three (3) cement silos (one of which is equipped with a weigh hopper), and elevated aggregate storage bins with charging hopper and conveyor.

Washed rock and sand are derived from off-site source(s) and are transported onto the facility by haul trucks. The sand and aggregate are dumped in the storage pile area shared by the asphalt batch plant. A front-end loader then transfers the aggregate to the charging hopper as needed. From the charging hopper, the aggregate is transported at a rate of 200 tons per hour (T/hr) by a conveyor to the elevated storage bins. The aggregate travels along a conveyor to a weigh hopper where it is transferred directly to a mixer truck in the desired proportions. Raw cement is batched in either of two (2) locations: in the first case, it is discharged directly onto the aggregate conveyor, and in the second case, it is transferred directly to the mixer truck. Water is added at the common aggregate/cement entry point simultaneously. Aggregate and approximately two-thirds of the water are added to the mixer prior to introduction of cement. The last portion of water is added after all other ingredients have been mixed. The mixer truck blends the mixture and transports the concrete off-site. The maximum allowable production capacity for the concrete batch plant is 75 cubic yards per hour (yd<sup>3</sup>/hr).

Cement is delivered by bulk tanker truck, which pneumatically conveys the cement to one of three (3) storage silos.

The concrete batch plant provides aggregate for delivery off-site. A front-end loader either transfers the aggregate directly to the haul trucks or to the pea gravel hopper (PG Hopper), which in turn drops the aggregate into haul trucks.

Particulate emissions from the three (3) cement silo bin vents are controlled by two (2) minibaghouses. Silo #1 and Silo #2 (used for backup and custom mixes) vent to a common baghouse. Silo #3 is the primary cement storage bin and has a dedicated baghouse. Both baghouses are of identical design and manufacture. Bags are cleaned by motor driven shaker. Baghouse cement dust reclaimed by the shaker is returned to the storage bin.

Emissions from operation of the concrete batch plant include fugitive PM and PM<sub>10</sub> emissions resulting from loader and truck traffic on unpaved roads, aggregate drops, aggregate transport on uncovered conveyors, and wind erosion of exposed storage piles. Point source emissions exit each of two (2) minibaghouse vents.

### PROJECT DESCRIPTION

Interstate Concrete and Asphalt is replacing the existing FlexKleen baghouse on the portable hot mix asphalt plant with a new baghouse. Air flows and air velocities will remain essentially the same. The baghouse specifications in Tier II Operating Permit #017-00048 are to be altered according to Interstate's submittal of the replacement's specifications.

### SUMMARY OF EVENTS

July 7, 1995:	Interstate Concrete & Asphalt was issued a Tier II OP to fulfill RACT/RACM Implementation Project requirements.
May 8, 1996:	Interstate Concrete & Asphalt submits a request for a modification of permit control equipment specifications for Tier II OP #017-00048.

## **DISCUSSION**

### **1. Emission Estimates**

No emissions were estimated for this project (see Appendix A to review the relevant information submitted by the Permittee). The emission and material throughput limitations will not be modified.

The hot mix asphalt plant is still subject to the grain loading standard of 0.04 grains per dry standard cubic foot (gr/dscf) specified by 40 CFR 60 - Subpart I. The pound per hour (lb/hr) and ton per year (T/yr) emissions limits for the hot mix asphalt plant stack were based on past performance test air flow rates and the NSPS grain loading standard.

### **2. Modeling**

No modeling analysis was performed for this project.

### **3. Area Classification**

Interstate is located in the Sandpoint PM<sub>10</sub> nonattainment area, in Bonner County. The area is designated as attainment or unclassifiable for all other criteria pollutants.

### **4. Facility Classification**

Interstate Concrete and Asphalt's Sandpoint facility is not a major source. Interstate is not a designated facility, as defined in IDAPA 16.01.01.006.25 of the Rules for the Control of Air Pollution in Idaho.

### **5. Regulatory Review**

The facility is subject to the following permitting requirements:

- |                                    |  |
|------------------------------------|--|
| a) <u>IDAPA 16.01.01.200</u>       | Procedures and Requirements for Permits to Construct.  |
| b) <u>IDAPA 16.01.01.401.03(a)</u> | Tier II Operating Permit Required for Attainment of a National Ambient Air Quality Standard; |
| c) <u>IDAPA 16.01.01.403</u>       | Permit Requirements for Tier II Sources;   |
| d) <u>IDAPA 16.01.01.406</u>       | Obligation to Comply;  |
| e) <u>IDAPA 16.01.01.625</u>       | Visible Emissions Opacity Restrictions;  |
| f) <u>IDAPA 16.01.01.650</u>       | General Rules for the Control of Fugitive Dust; and  |
| g) <u>IDAPA 16.01.01.808</u>       | Fugitive Dust Control for Asphalt Plants.  |

## **FEES**

Interstate's request for this modification of the permit does not qualify as a substantive modification. Therefore, a \$500.00 Tier II Operating Permit fee specified by IDAPA 16.01.01.470 of the Rules, is not required. Interstate's payment for issuance of Tier II OP #017-00048 was received on August 10, 1995.

## **RECOMMENDATIONS**

After a review of the submittal from Interstate, the Bureau staff recommends that DEQ issue Interstate Concrete & Asphalt revised pages for Tier II OP #017-00048 to reflect the new control equipment specifications.

Emission limits and operating hour restrictions shall remain unchanged.

No public comment is required because this is a non-substantive permit modification.

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cc: G. Burr, NIRO  
Source File  
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## **Appendix A**

### **Replacement Baghouse Specifications**

# INTERSTATE CONCRETE & ASPHALT. FOR MODIFICATION OF OP #017-00048

## AESCO MODEL 420 BAGHOUSE

## EXISTING FLEXKLEEN BAGHOUSE

MANUFACTURER	Asphalt Equipment and Service Co.	FlexKleen
# OF BAGS	360	736
SIZE	6" x 180"	6" x 83"
MATERIAL	Nomex	Nomex
LAYOUT	15 bags by 24 bags	16 bags by 46 bags
STACK HEIGHT	11.0m	10.7m
DIMENSIONS	1 sq meter	1 sq meter
DESIGN AIR/CLOTH	5:01	2:01
PRESSURE DROP	3.5"	3.5"
CLOTH AREA	8483 sq ft $\phi$	7996 sq ft $\phi$

$$A_{\text{area}} = (\pi)(D)(L) = \text{Surface Area of a right cylinder.}$$

$$A_{\text{area}} = \pi(6/12)(180/12)$$

$$A_{\text{area}} = 23.56 \text{ ft}^2$$

$$= (360)(23.56 \text{ ft}^2)$$

$$A_{\text{area}} = 8482 \text{ ft}^2 \leftarrow$$

Replacement Baghouse provides  
greater Surface Area of cloth.

$$\% \text{ Increase} = \frac{8483 - 7996 \text{ ft}^2}{7996 \text{ ft}^2} \times 100 = \boxed{6\% \text{ Increase}}$$